

Re-Lighting Point Abino Light

Monday November 28th 2016 by: Rick Doan

President of Point Abino Lighthouse Preservation Society

Mayor and Council

As you know 2017 is the 100th anniversary of the building of Point Abino Lighthouse (Picture 1) and our group PALPS or Point Abino Lighthouse Preservation Society is looking for ways to celebrate it. As you are aware there is an evergreen contract with the Town and the PAA or Point Abino Association that owns the property beyond the gate, so we just can't go out there and have a party and access is strictly restricted to this contract.

However, many times over the years it has been suggested to our group to turn back on the light at the Point Abino Lighthouse. This would be very costly and to get the Fresnel lens to turn again would take a lot of work as it originally floated on a bed of mercury, (since removed) and 13, 1- 1/2 inch bearings still there. The last keeper, the late Lew Anderson told me it turns freely with just those bearings but if it was hooked back up and continually turned the bearings would soon wear out as they couldn't support the 2,000 Lb lens by themselves.

Last year when the 1833 Buffalo Lighthouse on the corner of the Niagara and Buffalo Rivers was having installed a new stationary \$80,000 Fresnel Lens, I was invited by the President of the Buffalo Light, Mike Vogal, to come and visit the installation which I did. There I met the only person in the world who still makes Fresnel Lenses, Dan Spinella of Artworks Florida. After the installation, Mike Vogal and his group worked with the US Coastguard on how to re-light their new lens.

They agreed on a 100 watt equivalent LED light bulb. Mike asked me to view it from just over 2 miles away at the old Fort at night which I did and could see it. It didn't stand out as there is so much light pollution over there, but could pick it out.

So as fact gathering we thought we would check with our Canadian Coast Guard to see if it was possible that they would OK basically the same thing at Point Abino Lighthouse. Their biggest concern was " Mislead, Mariners". After 4 months of going back and forth with them and detailing our plan more, they have agreed (att: A) to an isophase light in our Lighthouse. This means it would go on for 2 seconds and off for 2 seconds with a 100 Watt equivalent LED Bulb. The Coastguard are aware that this project will have to pass Town Council first

We have partnered with Ryan Fazekas of Ridgeway who owns Regional Signal and also a Machine shop in Fort Erie called Anderson Detector shafts to help us on this project. His expertise will be invaluable on this project.

Together we did a test of a 100 watt replacement, 14 Watt, 1500 Lumens, 5,000K

Light bulb across Abino Bay from Bertie Boating Club area to Waterfront Park

I could see it going off and on , but wasn't overly bright. I then emailed Dan Spinella from Florida Artworks and asked the question if this bulb, in our 3rd order Fresnel lens would be able to see 2. 4 miles across Abino Bay. (Pic 2)

His answer: (Att.B) "I couldn't tell the exact range, but a 3rd order lens with a 100 watt bulb will be visible much further than 2.4miles. Especially coming from the flash panel. The flash panel gathers and directs more light than in a fixed lens".

So our plan is a "non-destructive" installation of our light socket mounted on a post with a small parabolic mirror behind it, as well as an aluminum plate to prevent light from going out into the lake. (Pic 3 & 4, Daytime and Night) We would turn the lens 1/4 turn to 42 Degrees Northeast and have pointed toward Waterfront Park. The project is having the Fresnel Lens non rotating and stationary. The installation would be a matter of opening the door on the lens, attaching with plastic zip ties what we have, to the current post that is in the middle of the lens (Pic 5, Note last keeper's hand on light post) and dropping the 120V lamp wired down through to be plugged into an outlet with Last Miles

(who currently have internet equipment up there) .

The cost for electricity if the bulb was on full time for a year with this bulb would be \$1.69

The isophase or flasher has not been bought yet and if Council OK's our plan, will then be purchased.

The light would not be a sweeping across the Abino Bay, as when the Lighthouse was in operation. It would not shine into residences homes. If you were to go to Waterfront Park it wouldn't light up your vehicle. You would have to look across the bay and would be easily be seen with its flashing light.

At the same time, as well as when Ryan Fazekas and myself are installing this, we ask that Mike Vogal, who I mentioned earlier, be up there with us. He is an expert on Fresnel Lenses and whenever I would look for information of Fresnel lenses for our tour talks his name always came up. He has spoken twice as our PALPS meetings and is well qualified to examine our lens. He will waive any fees associated with this examination which he has said: (Att: C)

"do a conditional assessment that would look at the state of the glass (Inventorying any Damage) and would look particularly at the condition of the litharge (bedding compound) and focusing wedges, the most likely of concern. He would also look at the mechanisms, and the state of the lantern(lens room) and its ventilating system. (Pic 6)

His exam would be basic, and intended to identify potential problems. If there are serious concerns which he doesn't anticipate, he would recommend inspection by an expert lampist and could provide some contacts.

This would involve minimal touching of the lens itself. It could also provide some teaching moments on the care and inspection of lenses, for the town rep as well as for PALPS.

He is not looking for compensation for this.

Our Fresnel lens is valued at 1 Million Dollars and his exam for free would be great preventative maintenance.

In addition below the lens, sits the clockworks mechanism. (Pic 7 rusted metal box) It was used between 1918 and 1942 when power finally came to the lighthouse. Its purpose was to rotate the lens. It has a hand crank with a cable on a drum that is attached to a weight, much like a grandfather clock. When the weight reached the first floor which was every 6 hours it had to be cranked to the top again. We would like to request the Town to bring that down to the first floor along with one of the square tubes pulleys and weight, (Pic 8) so we have several other artifacts to show for the 100th anniversary. That equipment hasn't been used since 1942 and would make wonderful displays as we educate the public on Light House Keepers duties as well as add to our current displays that we restored and have put out there the last few years.

So if council passes this requested resolution, The Canadian Coast Guard would work with us to make what's called a noteship or a notice to Mariners

The timing of our installation is that we would like to go up near the end of April to install and inspect. Turn it on and let it run continually to the end of October.

In October a decision could be made by the Town if they want to keep it going all year, turn it off as our 100th anniversary ends, or turn off and turn back on the following year. In any case we would have to work with our contact at the Coast Guard and adjust or cancel the "notship" order.

Good afternoon Rick,

As discussed in our telephone conversation;

After review, Canadian Coast Guard - Aids to Navigation Program has no objection of privately lighting Point Abino Lighthouse for its 100th anniversary next year.

As advised, at the time the lighthouse is relit, a Notice to Shipping should be requested through NotshipDesk – Prescott to inform mariners of the change in status and particulars of the light to be displayed.

As the time approaches, the ATON Program is willing to provide guidance in drafting a notice with information that should be included in the broadcast and written notice.

At such time the light is to be once again discontinued, NotshipDesk – Prescott should again be contacted requesting cancellation of the active Notice to Shipping.

The Light Flash Character chosen of “two seconds on and two seconds off” is known as an “Isophase”, (a light in which alterations of light and darkness are of equal length), is fairly common and again no objection.

For historical information, the 1991 publication of Canadian Coast Guard’s “**Inland Waters - List of Lights, Buoys and Fog Signals**” advertised the character of the light as “Group Flashing” (Flashing light in which the flashes are combined in groups, each group including the same number of flashes, and in which the groups are repeated at regular intervals. The eclipses separating the flashes within each group are of equal duration and this duration is clearly shorter than the duration of the eclipse between two successive groups).

(see attachment scanned from the 1991 publication with Point Abino highlighted)

I wish you all the best in your endeavours.

If you require any further information or assistance, please do not hesitate to contact me at your convenience.

Best regards,

Gary E. Greer

Supervisor Aids to Navigation

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<mailto:Gary.Greer@dfo-mpo.gc.ca>

Marine Aids Program/Programmes aides maritimes

Canadian Coast Guard/Garde cotiere canadienne

28 Waubeek Street / 28, rue Waubeek

Parry Sound, Ontario P2A 1B9

Discover the website of the CCG, Central & Arctic Region at: <http://www.marinfo.gc.ca>

A

From: DSpinella <dspinella@artworks-florida.com>

Date: October 25, 2016 at 9:00:13 AM EDT

To: 'Rick Doan' <rdoan5@me.com>

Subject: RE: Request for Information

Hi Rick,

I couldn't tell you the exact range, but a 3rd order lens with a 100 watt bulb will be visible much further away than 2.4 miles. Especially coming from the flash panel. The flash panel gathers and directs more light than a fixed lens. So if it's pointed in the correct direction, I would estimate it's range around 12 to 15 miles.

I'm glad you're enjoying the videos! I'm getting a lot of positive feedback. I've read 'A Short Bright Flash' too. I found it very interesting, especially reading the similarities of the struggles Fresnel himself went through trying to get the lenses manufactured, as I have encountered today.

Let me know if you have any other questions.

Thanks,
Dan

From: [Michael Vogel](#)

Sent: Sunday, November 13, 2016 9:57 PM

To: [rdoan5](#)

Subject: Re: Point Abino LH

Hi, Rick. I would do a condition assessment that would look at the state of the glass (inventorying any damage) and would look particularly at the condition of the litharge (bedding compound) and focusing wedges, the most likely area of concern. I would also look at the mechanisms, and the state of the lantern (lens room) and its ventilating system.

My exam would be basic, and intended simply to identify potential problems. If there are serious concerns, which I don't anticipate, I would recommend inspection by an expert lampist and could provide some contacts.

This would involve minimal touching of the lens itself. It could also provide some teaching moments on the care and inspection of lenses, for the town rep as well as your people.

I'm not looking for compensation for this. Such a deal.

Mike Vogel



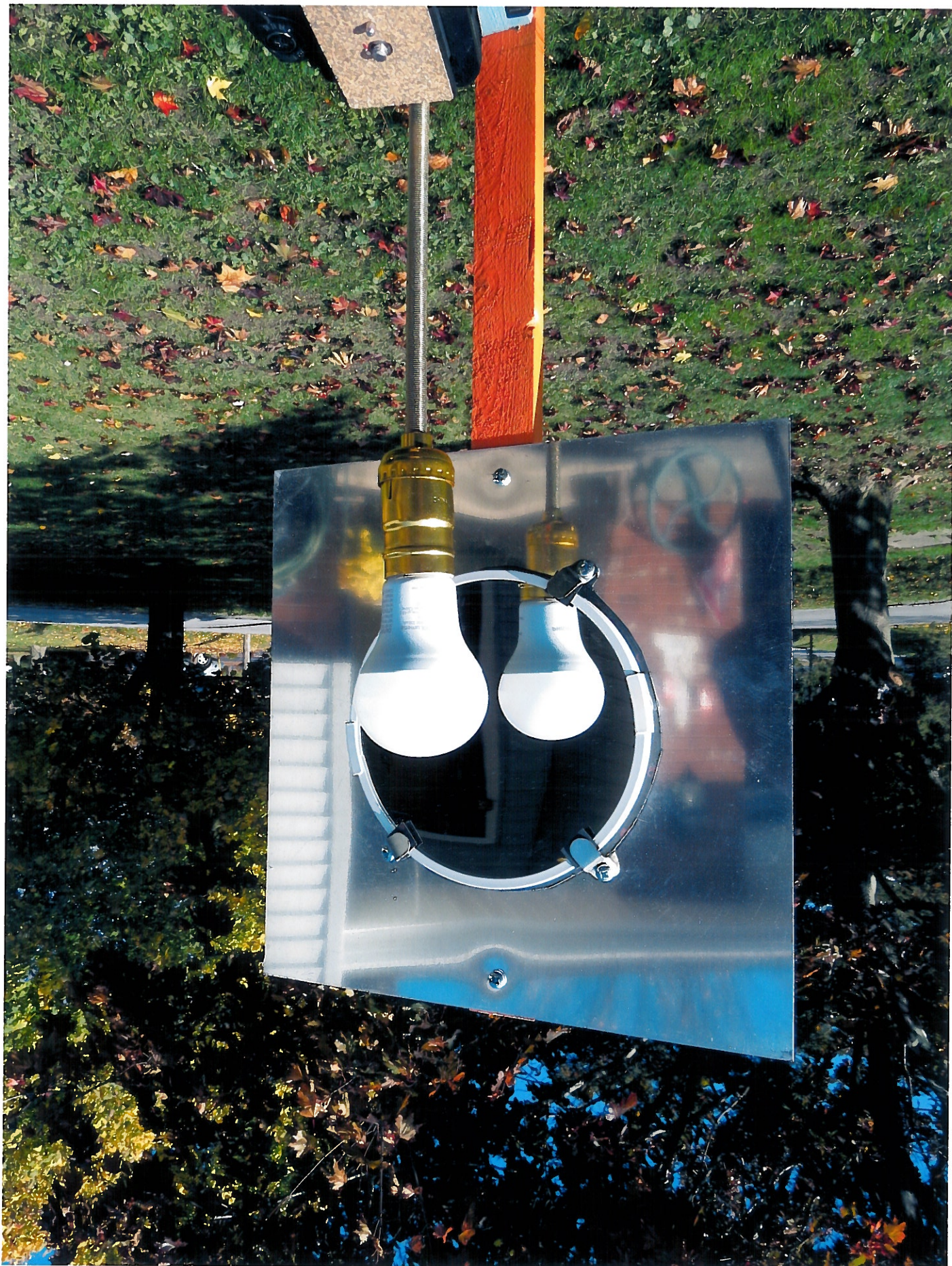


Google Earth

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Imagery Date: 6/5/2015 42°50'51.57" N 79°04'14.82" W elev 550 ft eye alt 13656 ft

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